

### **REMARKS/ARGUMENTS**

[0400] Applicant respectfully requests as per MPEP § 706.07(c) that the Final Rejection be withdrawn and that the claims as previously presented be allowed. At the very least, for the multiple and legitimate reasons listed below, the Final Detailed Office action of 8/19/2005 should not be made final.

[0401] In making the final rejection, the examiner has incorrectly and without supporting argument cited new grounds for rejection which are in no way related to the amendments submitted by applicant. In other words, the examiner has not demonstrated that the amendments made by the applicant were the reasons for citing the particular references that he used. This is discussed in detail in Section I below.

[0402] In making the final rejection, the examiner has relied on a reference that was initially disclosed by applicant in applicant's original Information Disclosure Statement ("IDS") and already considered by the previous examiner. It was inappropriate for the examiner to resurrect the reference and use it for new grounds of rejection. This is discussed in detail in Section II below.

[0403] Finally, in the Final Detailed Action, the examiner grossly mischaracterizes both the references cited and applicant's claims to form an invalid basis for rejection. The examiner also stretches beyond reasonableness the definitions of common terms in order to attempt to equate applicant's claims and the cited prior art. This is inappropriate and is discussed in detail in Sections III and IV below.

#### **[0404] I. The New Grounds Cited for Rejection Were Not Necessitated by Applicant's Amendments**

[0405] MPEP §706.07(a), page 700-73, states that actions on the merits shall be final, "where the examiner introduces a new ground of rejection that is necessitated by applicant's amendment of the claims...." Applicant asserts that the latest amendment of the claims only served to clarify terms and represented no substantial change to the claims and therefore do not

necessitate the new grounds of rejection cited by the examiner. The examiner gave no reasoning as to how applicant's changes necessitated the use of the new references.

[0406] There were four types of changes made by applicant in the previous amendment. First, applicant added language to indicate that the rigid members were held in contact with drive wheels by the force of gravity as in Claims 1, 5, 9, and 13. Second, applicant added language that the rigid members are rotated at different rates than their respective drive wheels as in Claims 1, 5, 9, and 13. Third, applicant added language to help define the term "ring" as in Claims 3, 4, 6, 7, 11, 12, 14, and 15. Finally, applicant cancelled claims that claimed that the rigid members rotated about substantially the same rotational axis and placed that language into Claims 1 and 9. Each type of change is examined below.

[0407] a. Addition of Language Denoting Rigid Members are Held in Place by the Force of Gravity

[0408] Claim 1 originally and currently states that the first rigid member is "suspended" by the first drive wheel. The use of the term "suspended" was intentional and specific. The Merriam-Webster Collegiate Dictionary, 11th Edition defines the term "suspend" to mean to "HANG; *especially*: to hang so as to be free on all sides except at the point of support <*suspend* a ball by a thread>." Available at: <http://merriam-webstercollegiate.com>. To "suspend" implies that the rigid member hangs on the drive wheel and is not "supported" by the drive wheel or pressed onto the drive wheel. The term "support" means "to hold up or serve as a foundation or prop for." Available at: <http://merriam-webstercollegiate.com>. Indeed, applicant had used the term "hangs on" to describe the contact between the second rigid member and the second drive wheel and changed it to its equivalent term "suspended by" in order to use consistent language throughout the claim. One could not reasonably say that one is suspended by the ground one is standing on, yet this is how the examiner seems to use the term "suspended." One could reasonable say that one is suspended by a parachute while skydiving, and this is how the applicant used the term "suspended" in Claim 1.

[0409] Furthermore, the term used by applicant "inner annular surface" implies a annular or ring structure to the rigid member. It is inappropriate to interpret the term "inner annular surface" to mean the inner surface of a hole in a disk as opposed to the inner surface of a ring. Therefore previous to applicant's last amendment, the language of the claim clearly implies a ring shaped rigid member suspended by drive wheels and held in place by gravity. Subsequently, applicant's addition of language to Claim 1 stating that the rigid member is held in contact with the drive wheel by the force of gravity adds no substantial matter to the claim and cannot necessitate a new ground for rejection by the examiner that was not available before the addition of the language.

[0410] The same language was added to Claim 5 and the same argument applies.

[0411] In Claim 9, applicant used the term "rests on" to describe the contact between the rigid members and the drive wheels. "Rests on" implies sitting upon or on top of which subsequently implies being held in place by gravity. If the rigid members were not held in place by the force of gravity, a term such as "fastened to" or "attached to" would have been used. Therefore previous to applicant's last amendment, the language of Claim 9 clearly implies a rigid member resting on drive wheels and held in place by gravity. Subsequently, applicant's addition of language to Claim 9 stating that the rigid member is held in contact with the drive wheel by the force of gravity adds no substantial matter to the claim and cannot necessitate a new ground for rejection by the examiner that was not available before the addition of the language. The same language was added to Claim 13 and the same argument that applies to Claim 9 applies to Claim 13.

[0412] Furthermore as to Claims 1 and 9 the examiner does not state how the addition of language pertaining to rigid members being held in place by gravity necessitated the new grounds. In other words, there is no reason why the addition to the claims of language describing rigid members held in place by gravity necessitates that Heintz [US 2,466,312] be used as a 35 USC § 102(b) reference. Also, please note that Heintz is US patent No. 2,466,312 and was incorrectly identified as US 3,466,312 on page 2 of the Final Detailed Action.

[0413] b. Addition of Language Stating Drive Wheels and Rigid Members Rotate at Different Angular Rates

[0414] Applicant's previous amendment added language to Claims 1, 5, 9 and 13 that the rigid members rotate at different angular rates than the drive wheels. This change was made in response to a phone interview with the examiner where the examiner stated that the claim as configured prior to the last amendment could include a configuration where the annular ring was pressed onto the drive wheel, hence locking them together and therefore forcing them to have the same angular rates. This stemmed from the examiner's assertion that "annular ring" and "disk" have the same meaning. The examiner implied that a disk with a small hole in the center, such as a compact disc, could be considered an annular ring. Although applicant maintains that this is an unreasonable definition of the term "annular ring," applicant nonetheless added language to the claims that the drive wheels and their respective rigid members rotate at different angular rates in order to eliminate the possibility of the examiner's interpretation of the claim to include an annular ring (actually a disk) press fit onto the drive wheel.

[0415] As shown in the following paragraphs, under reasonable interpretations of the language in the claims, the amendment was unnecessary and did not change the nature of the claims and therefore the change could not have necessitated the use of a new reference by the examiner.

[0416] In Claims 1 and 5, the rigid member is being suspended by the drive wheel in contact with the inner annular surface of the rigid member. Since this is not a press fit of the drive wheel into the rigid member, the drive wheel and inner annular surface of the rigid member must necessarily be of different diameters and therefore the drive wheel and the rigid member which it is acting on will be rotating at different angular rates. The addition of language in Claims 1 and 5 to state what must be true by virtue of the rest of the language in the claim, does not alter the claim in any significant way and therefore the change could not be the basis of a new rejection necessitated by the change. In other words, there is no reason why the addition to the claims of language stating that the drive wheel and rigid member rotate at different angular rates necessitates that Heintz be used as a 35 USC § 102(b) reference.

[0417] In Claims 9 and 13, the rigid member rests on the drive wheel. The addition of language in Claims 9 and 13 that the drive wheel and rigid members rotate at different angular rates is the equivalent of stating that they are not rotating at the same angular rate. For the drive wheel, which is driving the rigid member, to be rotating at the same rate as the rigid member, they must both have the same outside diameter. Therefore out of the entire continuum of design possibilities - including where the drive wheel is smaller in diameter than the rigid member and where the drive wheel is larger than the rigid member - the added language only serves to eliminate from the claim the one scenario where the drive wheel and rigid member have the same outside diameter. There is no reason why the elimination of the possibility of the drive wheels and rigid members being the same outside diameter necessitates that Heintz be used as a 35 USC § 102(b) reference. The addition of such language does not make any reference cited in the prosecution of this patent more or less applicable and the examiner has offered no reasoning why such language necessitated that Heintz be used. This same argument is also applicable to Claims 1 and 5.

[0418] c. Addition of Language Narrowing the Definition of "Ring"

[0419] Claims 3, 4, 6, 7, 11, 12, 14, and 15 originally contained and continue to contain the term "annular ring." In the Office Action dated 03/08/2005 and in a subsequent phone interview, the examiner asserted that Stanish [US 3,890,777] contained annular rings. See Page 3 of Final Detailed Action dated 03/08/2005: "Stanish disclose [sic] everything claimed except the rigid members being transparent." See Page 3 of Final Detailed Action dated 03/08/2005: "Stanish disclose [sic] everything claimed except for the clock work[sic] including a third output shaft...." However, clearly the reasonable description of the time indicating members of Stanish [38, 45] would be to call them "disks" or perhaps "disks with holes in the center." No reasonable interpretation of the term "annular ring" could be used to describe the Stanish [38, 45] time indicating elements. However, in a legitimate effort to move the patent process forward, applicant amended all claims containing the term "ring" to further state that the members have "an inner radius at least ten percent as large as the outer radius." This was done to help define



"ring" and to exclude a disk with a hole in it, such as shown in Stanish [38, 45], from the definition of "ring."

[0420] These additions add nothing to the claims except to help define a term in the claims which should have not required further definition. The Merriam-Webster Collegiate Dictionary, 11th Edition defines the term "ring" to mean "a circular line, figure or object." Available at: <http://merriam-webstercollegiate.com>. The term "disk" is defined as "a thin circular object." Available at: <http://merriam-webstercollegiate.com>. The terms are not interchangeable and have significantly different meanings. The addition of language to help define the term "annular ring" does not alter the claims in any meaningful way. There is no reason why the addition of language to define the usual and normal usage of the term "annular ring" necessitates that Heintz be used as a 35 USC § 102(b) reference. The addition of such language does not make any reference cited in the prosecution of this patent more or less applicable and the examiner has offered no reasoning why such language necessitated that Heintz be used.

[0421] d. Addition of Language Stating that the Rigid Members Rotate About Substantially the Same Rotational Axis

[0422] Applicant's previous amendment added language to Claims 1 and 9 that "said second rigid member rotates about substantially the same rotational axis as first said rigid member." Prior to applicant's Reply to Detailed Action of March 8, 2005, applicants claims included Claims 16 through 19 which contained language claiming embodiments where the rigid members rotated about the same rotational axis. Claim 16 claimed "The apparatus of Claim 1, wherein said rigid members rotate about substantially the same rotational axis." Claim 17 used the same language as Claim 4 with the addition of the phrase "wherein said rigid members rotate about substantially the same rotational axis." Claim 18 claimed "The apparatus of Claim 9, wherein said rigid members rotate about substantially the same rotational axis." Claim 19 used the same language as Claim 13 with the addition of the phrase "wherein said rigid members rotate about substantially the same rotational axis."

[0423] The addition of language to Claims 1 and 9 stating that the rigid members rotate about substantially the same rotational axis does not introduce any new claim, but merely represents a rearrangement and consolidation of the claims. For example, Claim 16 which stated "The apparatus of Claim 1, wherein said rigid members rotate about substantially the same rotational axis," was cancelled and the language "wherein said second rigid member rotates about substantially the same rotational axis as first said rigid member" was added to Claim 1. The net effect of these two revisions is that the amended Claim 1 became what was described in Claim 16. In other words, everything that was claimed in Claim 16 before the amendment was claimed in Claim 1 after the amendment. This was simply a consolidation of claims and added no new component to the claims.

[0424] A similar analysis of Claims 4 and 17 shows that everything that was claimed in Claim 17 before the amendment was claimed in Claim 4 after the amendment. A similar analysis of Claims 9 and 18 shows that everything that was claimed in Claim 18 before the amendment was claimed in Claim 9 after the amendment. A similar analysis of Claims 13 and 19 shows that everything that was claimed in Claim 19 before the amendment was claimed in Claim 13 after the amendment. None of these changes represent new or different embodiments. Nor do these changes alter the claims in any meaningful way. There is no reason why the consolidation of language necessitates that Heintz be used as a 35 USC § 102(b) reference. This consolidation of claims does not make any reference cited in the prosecution of this patent more or less applicable and the examiner has offered no reasoning why such language necessitated that Heintz be used.

[0425] e. Addition of "Means Plus Function" Claims 20, 21 and 22

[0426] Claim 20 is simply the same matter as Claim 1 but placed into a means plus function format. Similarly, Claim 21 is the same matter as Claim 3 and Claim 22 is the same as Claim 5. Claims 20, 21 and 22 do not represent new or different embodiments. There is no reason why the addition of means plus function claims which represent no new addition or limitation to the existing claims necessitates that Heintz be used as a 35 USC § 102(b) reference.

The addition of claims in the means plus function format does not make any reference cited in the prosecution of this patent more or less applicable and the examiner has offered no reasoning why such formatting necessitated that Heintz be used.

[0427] f. Summary of Section I

[0428] In general, the examiner has not offered any reasoning why any of the above discussed changes moved applicant's claims into a form where it becomes proper to use Heintz as a §102(b) reference. No specific features are described as applicable to Heintz now as a result of applicant's last amendments. Instead, the Final Detailed Action by the examiner seems to be a continuation of a pattern that has developed over the prosecution of this patent application where the examiner cites references and rejects claims, then applicant responds, then examiner declares the previous argument moot and cites new references and rejects claims. This goes against PTO policy which states "Switching ... from one set of references to another by the examiner in rejecting successive actions claims of substantially the same subject matter, will alike tend to defeat attaining the goal of reaching a clearly defined issue for an early termination, i.e., either an allowance of the application or a final rejection." MPEP §706.07, page 700-71. Considering that in the instant case, the examiner has introduced a new set of references even though the claims are of substantially the same subject matter, applicant should be allowed to respond and fully develop the issues and therefore the final rejection should be withdrawn as premature as per MPEP § 706.07(d).

[0429] In response to the previous Detailed Action, applicant had attempted to cooperate by adding definitions to the claims even though any reasonable interpretation would not have required those definitions (i.e. the difference between a ring and a disk). And although these changes by applicant represent no meaningful change, applicant's right to a full and fair hearing has been cut off. As stated in the MPEP, "The examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a *clear issue between applicant and examiner should be developed*, if possible, before appeal." MPEP § 706.07, page 700-72 (emphasis added).



[0430] II. The Prior Art Cited by Examiner Was Previously Considered and Determined Not to be Applicable

[0431] As discussed in Section I above, none of the amendments made by applicant in his Reply to Detailed Action of March 10, 2005 substantially alter the character of the claims. The amendments simply define the term "ring", state that gravity works on the rigid members and that the drive wheels and rigid members rotate at different rates. These amendments are all extremely minor and do not justify the resurrection of prior art that had been considered previously by the previous examiner. The current examiner offers no explanation of how the minor changes to the claims made by applicant have moved applicant's claims into a configuration that now warrants the use of Heintz as a prior art reference. The examiner makes no statements in the Final Detailed Action which pertain specifically to applicant's amended claims. In other words, the examiner does not state how the amendments now put the claims in a configuration that warrants the use of Heintz as a prior art reference but seems to just make an argument that could have been made independent of applicant's latest amendments.

[0432] In the first office action, dated 04/07/2004, the examiner, Michael L. Lindinger, considered Heintz and did not use Heintz as a reference in the office action. This is indicated by Mr. Lindinger initialing next to Heintz on the IDS. The current examiner has not indicated how applicant's minor modifications to the claims have changed the claims to transform a once-considered and unused reference into a primary reference used in a §102(b) rejection. Applicant asserts that the latest amendments to the claims do not warrant discarding a previous examiner's determination and that the previous examiner's determination should be given full faith and credit. As stated in MPEP § 706.04, page 700-71, "Full faith and credit should be given to the search and action of a previous examiner unless there is a clear error in the previous action...."

[0433] Applicant requests that the use of Heintz as a reference be withdrawn and the application allowed. Applicant also asserts that aside from the contention that it was improper to resurrect Heintz as a reference because it was already considered, the use of Heintz as a reference fails on its merits as discussed in Sections III & IV below.

[0434] III. 35 USC § 102(b) Rejection: Novelty

[0435] For a 35 USC § 102(b) rejection to be appropriate, "the reference must teach every aspect of the claimed invention either explicitly or impliedly." MPEP § 706.02, page 700-21. There are several aspects of applicants claimed invention that are not taught by Heintz making a § 102(b) rejection inappropriate. In making a § 102(b) rejection, the examiner incorrectly interprets Heintz and applicant's claims. Each mischaracterization and error is detailed in the following paragraphs.

[0436] a. Discussion of §102(b) Rejection of Applicant's Claims 1 and 9

[0437] The Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 1 and 9 states on page 2 that "Heintz discloses an apparatus for the display of time [figures 1-3], comprising: a clockwork [column 1, lines 36-37]; said clockwork having two coaxial output shafts [24,28]...." The statement is wholly inaccurate. A cursory examination of Heintz figure 3 clearly shows that output shafts 24 and 28 are not coaxial but parallel and separated by a considerable distance. Applicant is at a loss as to how two shafts separated by a considerable distance and clearly labeled as such could be called coaxial. Since Heintz does not disclose a clockwork with two coaxial output shafts, it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0438] In the same sentence, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 1 and 9 states "said clockwork having two coaxial output shafts [24,28] driven at different angular rates...." Again, the statement is wholly inaccurate. An examination of Heintz figure 3 shows that the shafts 24 and 28 are driven at the same angular rate. The clockwork [19] turns an output shaft [21] onto which is attached a gear [22, column 2, lines 9-11] which meshes with two gears [23, 27] each having 60 teeth [column 2, lines 14 and 30]. Since they have the same number of teeth and are both driven by the same gear [22], gears 23 and 27 each turn at the same angular rate. Gears 23 and 27 are each attached to the shafts [24 and 28] cited by the examiner [column 2, lines 12-14 and 29-31], therefore since the gears [23 and 27] are rotating at the same rate, the shafts they are rigidly attached to [24 and 28] must also

be rotating at the same angular rate. Therefore, the examiner's statement that the two drive shafts are "driven at different angular rates" is incorrect. Since Heintz does not disclose a clockwork with two coaxial output shafts driven at different angular rates, it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0439] In the same sentence, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 1 and 9 continues "two drive wheels [26, 36], one drive wheel attaches[sic] to each of the said drive shafts...." The statement is incorrect. Examination of Heintz figure 3 clearly shows that shafts 24 and 28 are not attached to gears 26 and 36. Heintz column 2, lines 15-18, states "Stud shaft 24 rigidly carries a smaller ring gear 25 that has ten teeth which mesh with a larger ring gear 26 having forty teeth." Clearly, gear 26 is not attached to shaft 24. Similarly, Heintz [column 2, lines 29-40] describes how shaft 28 rotates gear 27 which meshes with gear 30 which is rigidly attached to gear 32 which meshes with gear 33 which is rigidly attached to gear 35 which meshes with gear 36. Clearly, gear 36 is not attached to shaft 28. Since Heintz does not disclose "two drive wheels [26, 36], one drive wheel attaches[sic] to each of the said drive shafts," it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0440] It is also inaccurate to describe the gears in Heintz as drive wheels as is done in the Final Detailed Action. "Drive wheel" is a broader term than gear. A gear is a specific type of drive wheel that uses protrusions or teeth around its outer diameter to mesh with corresponding teeth on another gear. The term "drive wheel" can include a gear, but also includes configurations that use friction, magnetics or other methods of driving members.

[0441] In the same sentence, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 1 and 9 continues "a first rigid member [15] with an inner annular surface." Applicant strongly asserts that there is no inner annular surface on the Heintz disk [15]. The disk [15] is repeatedly referred to as a disk. "On front of 14 is another peripherally toothed disc 15...." [column 1, line 50]. "The disc 15 carries an hour hand 16." [column 1, line 52]. "In front of disc 15 is another transparent disc 17...." [column 1, lines 54-55]. "...meshing with the teeth of the hour disc 15...." [column 2, line 42]. Nowhere in Heintz is the disk 15 referred to as a ring

and nowhere is there mention of an inner annular surface. None of the drawings show the disk [15] with anything that could be considered an inner annular surface. No explanation can be found in the Final Detailed Action which shows where the alleged inner annular surface is on the disk [15], the Final Detailed Action simply declares there to be an inner annular surface and provides no supporting explanation or argument explaining the assertion. Since Heintz does not disclose "an inner annular surface," it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0442] Next, still in the same sentence, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 1 and 9 continues "...an inner annular surface which is suspended by the first of said drive wheels...." The use of the term "suspended" is inaccurate and does not fall within a reasonable use of the term. As explained in paragraph [0408] above, the term "suspended" implies hanging. The examiner should have used a more accurate and proper term to describe Heintz such as "supported" or, as used in Heintz, "removably placed to rest upon." [column 4, lines 1-2]. Since Heintz does not disclose "...an inner annular surface which is suspended by the first of said drive wheels," it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0443] Similarly, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 1 and 9 states "a second rigid member [17] with an annular surface." However, applicant, in Claim 1, is claiming a rigid member that is internally driven by contact with an inner annular surface, not an external annular surface such as how disk [17] is driven in Heintz. Heintz states that "disc 17 carrying a minute hand 18 and peripherally toothed to mesh with gears 7 and 11," [column 1, line 55 through column 2 line 2] clearly demonstrates that the disk [17] is externally driven and does not have an inner annular surface in contact with a drive wheel as claimed by applicant. This is also clearly illustrated in Heintz figures 1 and 2. Since the examiner has not asserted that the second rigid member in Heintz is driven by contact with an inner annular surface, it was inappropriate for the examiner to reject applicant's Claim 1 under 35 USC §102(b) since the examiner did not assert that every aspect of applicant's invention is disclosed by Heintz.

[0444] Next, in the same sentence, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 1 and 9 continues "...an annular surface which is suspended by the second of said drive wheels..." As discussed in paragraph [0442], the use of the term "suspended" is inaccurate and does not fall within a reasonable use of the term. As explained in paragraph [0408] above, the term "suspended" implies hanging. The examiner should have used a more accurate and proper term to describe Heintz such as "supported" or, as used in Heintz, "removably placed to rest upon." [column 4, lines 1-2]. Since Heintz does not disclose "...an inner annular surface which is suspended by the second of said drive wheels," it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0445] b. Discussion of §102(b) Rejection of Applicant's Claims 3 and 11

[0446] First, as discussed above, applicant asserts that Heintz does not disclose everything in Claims 1 and 9, therefore for that reason alone, claims 3 and 11, as dependent on Claims 1 and 9 respectively, should not be subjected to a §102(b) rejection and should be allowed because every aspect of applicant's invention is not disclosed by Heintz.

[0447] Furthermore, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 3 and 11 states on page 3 that "Heintz discloses wherein the rigid members are substantially clear annular rings..." This is incorrect. Nowhere in Heintz is there a description, figure or mention of rings. The only parts in Heintz disclosed to be clear are two disks [15,17]. These disks [15, 17], are consistently described as disks. "[P]eripherally toothed disc 15," [column 1, line 50], and "in front of disc 15 is another transparent disc 17," [column1, lines 54-55], are two examples of how the disks [15, 17] are described in Heintz. To call the disks [15, 17] of Heintz annular rings distorts the definitions of "disk" and "ring" in a wholly unreasonable manner. "Ring" and "Disk" are different words with specific and different meanings that are not interchangeable and to use them interchangeably causes confusion and is unreasonable. Since Heintz does not disclose clear annular rings, it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.



[0448] In the same sentence, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 3 and 11 continues "wherein said first rigid member having an inner radius [not explicitly labeled] at least ten percent as large as the outer radius of said first rigid member...." Applicant asserts that there is no inner radius because the rigid members in Heintz are disks and not rings and therefore it would be impossible to explicitly label the non-existent inner radius. Furthermore, there is clearly no inner radius referred to in Heintz. Heintz does not refer to an inner radius in any of the three figures and nor is an inner radius referred to in the text of Heintz. Heintz Figure 1 does show circles in the center of the clock face, but these circles are not discussed in the specification and there is no evidence or text to support the notion that the circles represent through-holes in the disks. To the contrary, the most reasonable interpretation of the circles is that they are printed on the disks [15, 17] for decorative purposes in a manner similar to how the hour [16] and minute [18] hands are printed on the disks [15, 17]. This conclusion is based on the facts that there are no witness lines to through holes in the disks [15, 17] in Figure 2, there is no mention of through holes in the disks [15, 17] in the text of Heintz, and the disks [15, 17] are consistently referred to as disks in the text of Heintz. Since Heintz does not disclose substantially clear annular rings, it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0449] c. Discussion of §102(b) Rejection of Applicant's Claim 20

[0450] The Final Detailed Action dated 08/19/2005 in regards to applicant's Claim 20 on page 3 states "the claimed invention is discloses [sic] by Heintz in the above rejections." However, as discussed in detail above, Heintz does not disclose annular members. The time indicating members of Heintz are disks [15, 17], which are different than annular rings. Since Heintz does not disclose annular members, it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0451] d. Discussion of §102(b) Rejection of Applicant's Claims 4, 12, 21 and 22

[0452] First, as discussed above, applicant asserts that Heintz does not disclose everything in Claims 1, 9 and 20, therefore for that reason alone, Claims 4 (which depends on Claim 1), 12 (which depends on Claim 9), 21 (which depends on Claim 20) and 22 (which depends on Claim 20), should not be subjected to a §102(b) rejection and should be allowed because every aspect of applicant's invention is not disclosed by Heintz. For example, Claim 4, as dependent on Claim 1, includes everything in Claim 1 in addition to what is claimed in Claim 4. Since Claim 1, as discussed above, was improperly rejected and should have been allowed, Claim 4 should not be rejected because the elements of Claim 1 not disclosed by Heintz dictate that Heintz not be used as a §102(b) reference in rejecting Claim 4.

[0453] Furthermore, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claims 4, 12, 21 and 22 states on page 3 that "Heintz discloses wherein the rigid members are substantially clear annular rings [the discs [sic] are transparent] and a stationary third annular ring [14...." As discussed in great detail above, nowhere in Heintz is there a description, figure or mention of annular rings and it is improper to use "Ring" and "Disk" interchangeably. Since Heintz does not disclose clear annular rings, it is inappropriate to use Heintz for a §102(b) rejection because every aspect of applicant's invention is not disclosed by Heintz.

[0454] Applicant is unclear as to why applicant's Claim 21 was rejected in a discussion about a third stationary rigid member when applicant's Claim 21 does not disclose a third stationary rigid member. Applicant does maintain that the reasoning in Sections IIIc and IIId does apply to applicant's Claim 21 and that Claim 21 should not have been subjected to a §102(b) rejection since Heintz did not disclose every aspect of Claim 21.

[0455] IV. 35 USC § 103(a) Rejection: Obviousness

[0456] a. Discussion of §103(a) Rejection of Applicant's Claims 5 and 13

[0457] In rejecting Claims 5 and 13 on page 4 of the Final Detailed Action dated 08/19/2005, the examiner states that "Heintz discloses the claimed invention except for" the features necessary to indicate the second-of-the-minute and that Hartwig [US 3.668,858] teaches

to add a seconds indicator. Applicant reasserts the arguments in Section III that Heintz does not disclose the claimed invention. In other words, as argued above Heintz does not disclose each and every element contained within applicant's Claims 1 and 9. Therefore, the combination of Heintz and Hartwig does not disclose each and every element contained within applicant's Claims 5 and 13 (which incorporate Claims 1 and 9 respectively) and a §103(a) rejection is improper.

[0458] Applicant does not assert that the addition of an indicator which indicates the second-of-the-minute to a timepiece which indicates the hour-of-the-day and minute-of-the-hour is by itself a patentable feature. Applicant does assert that when a timepiece which indicates the hour-of-the-day and minute-of-the-hour is patentable, an additional embodiment of the timepiece that includes an indicator of the second-of-the-minute is also patentable. This is not because of the addition of the seconds indicator, but because the underlying timepiece is patentable. In other words, when a new type of clock is invented, versions with and without a seconds hand should be patentable, not because of the inclusion of a seconds hand, but because the basic clock design is patentable.

[0459] Accordingly, applicant asserts that since the Claims 1 and 9 are patentable, the addition of an indicator to indicate the second-of-the-minute should also be patentable. Therefore Claims 5 and 13 should not have been rejected under §103(a) and the claims should be allowed.

[0460] b. Discussion of §103(a) Rejection of Applicant's Claims 6 and 14

[0461] In rejecting Claims 6 and 14 on pages 4 and 5 of the Final Detailed Action dated 08/19/2005, the examiner states that "Heintz discloses the claimed invention except for...." Applicant reasserts the arguments in Sections III and IVa that Heintz does not disclose the claimed invention. In other words, as argued above Heintz does not disclose each and every element contained within applicant's Claims 1 and 9. Therefore, the combination of Heintz and Hartwig does not disclose each and every element contained within applicant's Claims 6 and 14 (which incorporate Claims 1 and 9 respectively) and a §103(a) rejection is improper.

[0462] Applicant also asserts that the purpose of the different sized rigid members, as shown in applicant's figure 5 was so that the rigid member farthest from the viewer would be visible and not hidden by the front rigid member. The different sized rigid members is a functional feature and has nothing to do with, as asserted by the examiner on page 5 of the Final Detailed Action, "assembling the timepiece and further aestheticizing the device."

[0463] Accordingly, applicant asserts that since Claims 1 and 9 are patentable, the addition of the feature that the rigid members have different diameters should also be patentable. Therefore Claims 6 and 14 should not have been rejected under §103(a) and the claims should be allowed.

[0464] c. Discussion of §103(a) Rejection of Applicant's Claim 7

[0465] In rejecting Claim 7 on page 5 of the Final Detailed Action dated 08/19/2005, the examiner states that "Heintz discloses the claimed invention except for...." Applicant reasserts the arguments in Sections III and IVa that Heintz does not disclose the claimed invention. In other words, as argued above Heintz does not disclose each and every element contained within applicant's Claim 1. Therefore, the combination of Heintz and Hartwig does not disclose each and every element contained within applicant's Claim 7 (which incorporates Claim 1) and a §103(a) rejection is improper.

[0466] In the same sentence, the Final Detailed Action dated 08/19/2005 in regards to applicant's Claim 7 continues, "Heintz discloses the claimed invention except for the first rigid member [the hour demarcation] is farthest from the clockwork]." First, applicant's Claim 7 claims more than just the first rigid member being farthest from the clockwork. Applicant's Claim 7 claims a configuration where the first rigid member has a flange which hides the drive wheels as described in the claim and shown in applicant's figures 7 through 12. The examiner makes no mention of these features and only discusses the positioning of the first rigid member. Since the examiner has not claimed that all of the features of applicant's invention were disclosed (the examiner did not claim the Heintz-Hartwig combination had a flange to hide the drive wheels) by Heintz in view of Hartwig, on this basis alone Claim 7 should not have been rejected.

[0467] Applicant also asserts that the purpose of the flange and rigid member positioning, as stated in the claim, is to hide the drive wheel from view. The configuration of the rigid members is a functional feature and has nothing to do with, as asserted by the examiner on page 5 of the Final Detailed Action, "for the purpose of time indication in the hour, minute and second sequence." This statement is inaccurate in that Claim 7 claims an embodiment where the drive wheels are hidden and makes no mention of an indicator of seconds. A non-existent seconds sequence indicator can not be the basis for a rejection on a claim that claims a feature of hidden drive wheels which is not disclosed by either prior art reference.

[0468] Finally, the examiner is incorrect in the assertion that "Hartwig discloses a timepiece wherein the hour demarcation is farthest from the clockwork [12]." Hartwig does not disclose a clockwork. A close examination of Hartwig reveals that the entire mechanism is driven by a reciprocating member [38, figures 7 and 16] which carries a disk [29] through 6° by engaging the toothed edge of the disk. This motion is described in detail [column 4, lines 55-58]. The Final Detailed Action on page 5 describes Hartwig as having a clockwork [12]. Item 12 in Hartwig is simply a longitudinal axis [column 3, line 57] which is coaxial with a pin [54] [column 4, line 32]. It is absolutely unreasonable to describe an item which indicates the location of an axis as a clockwork. Furthermore, the pin [54] does not rotate and does not drive any element in Hartwig.

[0469] Hartwig contains a pin [54, column 4, line 34], not a shaft, around which the indicating members rotate. Hartwig is a device which is driven by a single reciprocating arm [38] engaging the edge of a disk used to indicate seconds [29]. Once every minute, the seconds indicating disk [29] rotates so that a special, deeper tooth [37] is presented to the reciprocating member [38]. When the reciprocating member [38] engages the seconds indicating disk [29] at the deeper tooth [37], the deeper penetration of the reciprocating member [38] allows it to also engage a minute indicating disk [17], the result being the both the seconds indicating disk [29] and the minute indicating disk [17] are rotated through 6°. There is also a mechanism, located in the center of the minute indicating disk which rotates the hour indicating disk [44] through a toothed wheel arrangement [figure 2].



[0470] It is incorrect to assert that "Hartwig discloses a timepiece wherein the hour demarcation is farthest from the clockwork [12]," when there is no clockwork and the driving mechanism, the reciprocating arm [38] is not behind or in front of the indicating members but is located on the periphery of mechanism. Also, as shown in Hartwig figure 1, the hour indicator [44] is furthest from viewer, which is the opposite of applicant's claimed invention.

[0471] Accordingly, since the examiner is incorrect in that Heintz does not disclose everything in applicant's Claim 1, that applicant claims more than the position of the rigid member in Claim 7, that Hartwig does not disclose a timepiece where the hour demarcation is farthest from the clockwork, that Hartwig does not have a clockwork, and that applicant's Claim 7 is not for the purpose "of time indication in the hour, minute and second sequence," applicant's Claim 7 was improperly rejected. Therefore Claim 7 should not have been rejected under §103(a) and the claim should be allowed.

[0472] d. Discussion of §103(a) Rejection of Applicant's Claim 15

[0473] In rejecting Claim 15 on page 5 of the Final Detailed Action dated 08/19/2005, the examiner states that "Heintz discloses the claimed invention except for...." Applicant reasserts the arguments in Sections III and IVa that Heintz does not disclose the claimed invention. In other words, as argued above Heintz does not disclose each and every element contained within applicant's Claim 9. Therefore, the combination of Heintz and Hartwig does not disclose each and every element contained within applicant's Claim 15 (which incorporates Claim 9) and a §103(a) rejection is improper.

[0474] On page 5 of the Final Detailed Action dated 08/19/2005, regarding applicant's Claim 15, the examiner asserts that "Hartwig teaches that it is known in a timepiece device to use rings and disks in relation with each other for indicating time [figure 12]." This statement confuses the issues at question. First, the rigid members in applicant's invention are the time indicating features. That is, the first disk indicates hours and the second ring indicates minutes. This is vastly different than Hartwig where all of the indicators are disks. No ring in Hartwig is used to indicate time. There are no time indicating demarcations on any ring contained within

Hartwig. By any reasonable definition, the time indicating elements of Hartwig are all disks. The rings in Hartwig are only to transfer motion from the reciprocating member through the rotating disks. The examiner has not pointed to any ring in Hartwig that has a demarcation for use in the interpretation of time.

[0475] Accordingly, applicant asserts that since Claim 9 is patentable, the addition of the feature that the first rigid member is a disk and the second rigid member is a ring should also be patentable. Also, since the examiner is incorrect in that Hartwig does not disclose an embodiment where a ring has a demarcation and is used as a time indicator, applicant's Claim 15 should not have been rejected under §103(a) and the claim should be allowed.

[0476] V. Summary

[0477] Applicant's invention represents a novel and nonobvious improvement over the prior art in what is a crowded field. Time indicating devices have been around for centuries and many novel designs have been patented and marketed, several of which have been discussed or cited in the prosecution of this patent application. In such a crowded field, incremental innovation can yield significant economic returns. Without proper protection, new and innovative designs will not be brought to market and the public and inventors will both be harmed. In such a field, it is proper to allow patents for even small incremental design enhancements. Here, applicant asserts that his invention is a significant development in the indication of time and therefore a patent should be issued.


[0478] Applicant has clearly demonstrated that issuing a Final Detailed Action at this point of the prosecution process is premature. The reasoning behind the examiner's §102(b) and §103(a) rejections is based on incorrect assertions about the nature of applicant's claims, unreasonable definitions of commonly used terms, and a misunderstanding and mislabeling of the prior art references cited. Moreover, all elements of applicant's claims were not disclosed in the cited references and the examiner gave no reason for combining Heintz with Hartwig. Also, the examiner has based the rejection on prior art that was previously considered and found not to be pertinent. Finally, it was unreasonable to claim that applicant's previous claim amendments

necessitated new grounds of rejection. The examiner never explained why Heintz became a viable reference whereas it wasn't before and how the changes moved it from a situation where Heintz was not a viable reference to where Heintz became a viable reference. This is especially puzzling since applicant's previous claim amendments were definitional in nature and were done in response to the examiner's misinterpretation of commonly used terms.

[0479] Applicant is also concerned about the path this application has taken. Applicant has responded in full, sincerely, with respect, and in detail, to three office actions and each time, instead of discussing applicant's response and working toward acceptable claim language, applicant's arguments have been ignored and totally new grounds for rejection have been issued in the following office actions. This is not reasonable and has not helped to focus in on the pertinent issues. Applicant would like to move the application process forward with "the cooperation of the examiner." MPEP 706.07.

[0480] Accordingly, applicant respectfully requests that a timely Notice of Allowance be issued in this case, or at the very least, the proceeding be reopened and applicant and examiner cooperate to fully define applicant's invention.

Respectfully submitted,

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